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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,386	11/30/2005	Roni Zvuloni	30241	5525
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Martin Moynihan Anthony Castorina Suite 207 2001 Jefferson Davis Highway Arlington, VA 22202			EXAMINER	
			BOR, HELENE CATHERINE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/542,386	ZVULONI, RONI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Helene Bor	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 July 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 July 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/13/2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 400 System. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1-4 & 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Knowlton'089 (US Patent No. 6,427,089 B1).

**Claim 1:** Knowlton'089 teaches a shaft [also called a catheter] that has sufficient length to position an expansion device (Col. 7, Line 8-10). Knowlton'089 teaches an

expandable [inflatable] balloon (Col. 7, Line 61-62). Knowlton'089 teaches a plurality of strain gauges (Figure 2A & 3, Element 26 & Col. 15, Line 3-5) each operable to inform the physician a degree of expansion (Col. 14, Line 14-23 & Col. 14, Line 59 – Col. 15, Line 5) of a local portion of a wall of the expandable balloon (Col. 15, Line 6-10). [Note: There appears to be a discrepancy between Elements 24 and 26 in Knowlton'089's disclosure. Element 24 is referred in the disclosure as a sensor and as cooling media. See Col 13, Line 57 – Col. 14, Line 23. The assumption is made that the inventor meant to call the Element 26 and not Element 24 when referring to a sensor or type of sensor.]

**Claim 2/1:** Knowlton'089 teaches wherein at least one of the strain gauges is mounted external to a wall of the balloon (Col. 15, Line 6-10).

**Claim 3/1:** Knowlton'089 teaches wherein at least one of the strain gauges is mounted internal to a wall of the balloon (Col. 15, Line 6-10).

**Claim 4/1:** Knowlton'089 teaches wherein at least one of the strain gauges is embedded in a wall of the balloon (Col. 15, Line 6-10).

**Claim 7/1:** Knowlton'089 teaches the device further comprising a radio-opaque (Claim 30).

**Claim 8/7/1:** Knowlton'089 teaches a device comprising a plurality [at least portions] of radio-opaque markers mounted in an asymmetric configuration (Figure 1, Element 10 & Col. 6, Line 66 – Col. 7, Line 2).

**Claim 9/1:** Knowlton'089 teaches a device further comprising an ultrasound marker [transducer] distinguishable under [an external] ultrasound imaging (Col. 13, Line 21- 26).

**Claim 10/9/1:** Knowlton'089 teaches a device comprising a plurality of ultrasound markers [sensors] (Col. 15, Line 3-5) distinguishable under [an external] ultrasound imaging (Col. 13, Line 21-26), mounted in an asymmetric configuration (Figure 3, Element 26).

**Claim 11/1:** Knowlton'089 teaches that the strain gauges are operable to report strain (Col. 17, Line 29-35) through a wire connection [circuitry] (Col. 17, Line 14).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 5-6 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowlton'089 (US Patent No. 6,427,089 B1) as applied to claim 1-4 & 7-11 above, and further in view of Holmes'990 et al. (US Patent No. 4,873,990).

**Claim 5/1:** Knowlton'089 teaches the use of strain gauges on the balloon (Figure 2A & 3, Element 26 & Col. 15, Line 3-5) but fails to teach the circumferential configuration of the strain gauges around the balloon. However, Holmes'990 teaches the circumferential configurations (Figure 1, Element 15) of the strain gauges [wall sensors] (Col. 2, Line 52-55 & Col. 6, Line 9-14) around the balloon. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Knowlton'089 and Holmes'990 in order to provide a measurement of true circumferential pressure (Col. 6, Line 9-14).

**Claim 6/5/1:** Knowlton'089 teaches strain gauges mounted on the balloon (Figure 2A & 3, Element 26 & Col. 15, Line 3-5). Knowlton'089 fails to teach the circumferential configurations of the strain gauges. However, Holmes'990 teaches the circumferential configurations (Figure 1, Element 15) of the strain gauges [wall sensors] (Col. 2, Line 52-55 & Col. 6, Line 9-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Knowlton'089 and Holmes'990 in order to provide a measurement of true circumferential pressure (Col. 6, Line 9-14).

**Claim 12/1:** Knowlton'089 fails to teach a wireless connection used by the strain gauges for reporting. However, Holmes'990 teaches a device wherein the strain gauges are operable to report strain through telemetry [wireless connection] (Col. 4,

Line 30-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Knowlton'089 and Holmes'990 in order to provide information to remote equipment for monitoring (Col. 4, Line 38-36).

7. Claim 13-17, 19-23, 27-33 & 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowlton'089 (US Patent No. 6,427,089 B1 and further in view of Shah'737 (US Patent No. 6,081,737).

**Claim 13:** Knowlton'089 teaches a shaft [also called a catheter] that has sufficient length to position an expansion device (Col. 7, Line 8-10). Knowlton'089 teaches an expandable [inflatable] balloon (Col. 7, Line 61-62). Knowlton'089 teaches a plurality of strain gauges (Figure 2A & 3, Element 26 & Col. 15, Line 3-5) each operable to inform the physician a degree of expansion (Col. 14, Line 14-23 & Col. 14, Line 59 – Col. 15, Line 5) of a local portion of a wall of the expandable balloon (Col. 15, Line 6-10). Knowlton'089 fails to teach the detecting an obstruction. However, Shah'737 teaches a method for detecting obstruction in a blood vessel [diseased section] (Col. 5, Line 63 – Col. 6, Line 17). Shah'737 teaches a method for introducing into the blood vessel a catheter having a plurality of strain gauges operable to measure and report degrees of expansion of local strain gauges (Figure 11, Element 94, Figures 5A, 5B & 6, Col. 6, Line 12-17 & Col. 8, Line 14-24). Shah '737 also teaches a method of comparing expansions reported by a plurality of strain gauges (Col. 6, Line 18-34). Shah'737 teaches a method reporting obstruction of the blood vessel if at least one of the plurality of strain gauges reports less expansion than another of the strain gauges (Figure 11, Element 94, Figures 5A, 5B & 6, Col. 6, Line 12-17 & Col. 8, Line 14-24). It

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would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing near real-time a three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 14/13:** Knowlton'089 teaches further comprising determining a position of the balloon in a body of a patient (Col. 6, Line 66 – Col. 7, Line 2). Knowlton'089 fails to teach the device positioned in the artery. However, Shah'737 teaches the device is positioned within the artery at a position at which obstruction of the blood vessel is so reported (Figure 11, Element 94, Figures 5A, 5B & 6, Col. 6, Line 12-17 & Col. 8, Line 14-24). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing near real-time a three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 15/14/13:** Knowlton'089 teaches a method further comprising determining the position of the balloon by observing, using an x-ray visualization modality, a radio-opaque marker of the balloon (Col. 6, Line 66 – Col. 7, Line 2).

**Claim 16/15/14/13:** Knowlton'089 teaches a method comprising a plurality [at least portions] of radio-opaque markers mounted in an asymmetric configuration (Figure 1, Element 10 & Col. 6, Line 66 – Col. 7, Line 2).

**Claim 17/14/13:** Knowlton'089 teaches a method wherein the position of the balloon is determined by observing, using an ultrasound visualization modality, an

ultrasound-distinguishable marker disposed at a known position in the balloon (Col. 13, Line 21- 26).

**Claim 19:** Knowlton'089 teaches a shaft [also called a catheter] that has sufficient length to position an expansion device (Col. 7, Line 8-10). Knowlton'089 teaches an expandable [inflatable] balloon (Col. 7, Line 61-62). Knowlton'089 teaches a plurality of strain gauges (Figure 2A & 3, Element 26 & Col. 15, Line 3-5) each operable to inform the physician a degree of expansion (Col. 14, Line 14-23 & Col. 14, Line 59 – Col. 15, Line 5) of a local portion of a wall of the expandable balloon (Col. 15, Line 6-10). Knowlton'089 fails to teach the detecting an obstruction and the data analysis module. However, Shah'737 teaches a system for detecting obstruction in a blood vessel [diseased section] (Col. 5, Line 63 – Col. 6, Line 17). Shah'737 teaches a system for introducing into the blood vessel a catheter having a plurality of strain gauges operable to measure and report degrees of expansion of local strain gauges (Figure 11, Element 94, Figures 5A, 5B & 6, Col. 6, Line 12-17 & Col. 8, Line 14-24). Shah '737 also teaches a system of comparing expansions reported by a plurality of strain gauges (Col. 6, Line 18-34). Shah'737 teaches a system reporting obstruction of the blood vessel if at least one of the plurality of strain gauges reports less expansion than another of the strain gauges (Figure 11, Element 94, Figures 5A, 5B & 6, Col. 6, Line 12-17, Col. 8, Line 14-24 & Claim 17). Shah'737 teaches a data analysis module operable to calculate an analysis of data received from the plurality of strain gauges (Col. 6, Line 59 – Col. 7, Line 4). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an

apparatus and methods for providing a near real-time three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 20/19:** Knowlton'089 fails to teach the data analysis module. However, Shah'737 teaches a system wherein the data analysis module is further operable to record, in a memory module, data reported by the strain gauges (Claim 15 & 16). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing near real-time a three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 21/20/19:** Knowlton'089 fails to teach the data analysis module. However, Shah'737 teaches a system further comprising the memory module (Claim 15 & 16). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing a near real-time three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 22/19:** Knowlton'089 fails to teach the data analysis module. However, Shah'737 teaches a system wherein the data analysis module comprises a graphics display (Figure 8, Element 53). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing a near real-time three dimensional view of the

interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 23/19:** Knowlton'089 fails to teach the data analysis module. However, Shah'737 teaches a system wherein the data analysis module is operable to calculate an image of a blood vessel showing regions of obstruction therein, as indicated by data obtained from the strain gauges (Figures 5A-B & 6 & Figure 8, Element 54). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing a near real-time three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 27/19:** Knowlton'089 teaches a system further operable to display, on a graphics display (Figure 11, Element 402), an image obtained from a medical imaging modality (Col. 17, Line 1-5).

**Claim 28/27/19:** Knowlton'089 teaches wherein the imaging modality is a fluoroscope (Col. 17, Line 1-5).

**Claim 29/27/19:** Knowlton'089 teaches wherein the imaging modality is an ultrasound system (Col. 17, Line 1-5).

**Claim 30/27/19:** Knowlton'089 fails to teach the data analysis. However, Shah'737 teaches the data analysis module is operable to modify the image to represent, on the modified image (Figure 8, Element 53 & Element 54), areas of obstruction of a blood vessel as determined by the analysis of the data from the plurality of strain gauges (Col. 6, Line 59 – Col. 7, Line 4). Shah'737 produces images through

a type of imaging modality in this case mechanical strain gauges (Col. 6, Line 50-58). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089 and Shah'737 in order to present an apparatus and methods for providing a near real-time three dimensional view of the interior surfaces of a vessel using low cost, readily available components (Col. 2, Line 10-13).

**Claim 31/19:** Knowlton'089 teaches wherein at least one of the strain gauges is mounted external to a wall of the balloon (Col. 15, Line 6-10).

**Claim 32/19:** Knowlton'089 teaches wherein at least one of the strain gauges is mounted internal to a wall of the balloon (Col. 15, Line 6-10).

**Claim 33/19:** Knowlton'089 teaches wherein at least one of the strain gauges is embedded in a wall of the balloon (Col. 15, Line 6-10).

**Claim 36/19:** Knowlton'089 teaches the device further comprising a radio-opaque marker on the balloon (Col. 6, Line 66 – Col. 7, Line 2).

**Claim 37/36/19:** Knowlton'089 teaches a device comprising a plurality [at least portions] of radio-opaque markers mounted in an asymmetric configuration (Figure 1, Element 10 & Col. 6, Line 66 – Col. 7, Line 2).

**Claim 38/19:** Knowlton'089 teaches a device further comprising an ultrasound marker [sensor] (Col. 15, Line 3-5) distinguishable under [external] ultrasound imaging (Col. 13, Line 21- 26).

**Claim 39/38/19:** Knowlton'089 teaches a device comprising a plurality of ultrasound markers [sensors] (Col. 15, Line 3-5) distinguishable under [external]

ultrasound imaging (Col. 13, Line 21-26), mounted in an asymmetric configuration (Figure 3, Element 26).

**Claim 40/19:** Knowlton'089 teaches that the strain gauges are operable to report strain (Col. 17, Line 29-35) through a wire connection [circuitry] (Col. 17, Line 14).

8. Claim 18 & 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowlton'089 (US Patent No. 6,427,089 B1, in view of Shah'737 (US Patent No. 6,081,737) and further in view of Strommer'548 et al. (US Patent Application No. 2004/0138548).

**Claim 18/14/13:** Knowlton'089 teaches a system further comprising displaying, in a graphics display, an image of a portion of a body of a patient, obtained through use of a medical imaging modality (Col. 17, Line 1-5). Knowlton'089 and Shah'737 fail to teach image integration of the images. However, Strommer'548 teaches integration of two images from two different imaging modalities (Abstract & Page 2, Para 0013). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089, Shah'737 and Strommer'548 in order to view the location and orientation of the medical intervention device (e.g., catheter, needle) within the body of the patient during the operation (Page 1, Para 0002).

**Claim 24/23/19:** Shah'737 teaches the data analysis module (Col. 6, Line 59 – Col. 7, Line 4) and Knowlton'089 teaches the standard imaging modalities (Col. 17, Line 1-5). Knowlton'089 and Shah'737 fail to teach image integration of the images. However, Strommer'548 teaches integration of two images from two different imaging modalities (Abstract & Page 2, Para 0013). It would have been obvious to one of

ordinary skill in the art to combine the teachings of Knowlton'089, Shah'737 and Strommer'548 in order to view the location and orientation of the medical intervention device (e.g., catheter, needle) within the body of the patient during the operation (Page 1, Para 0002).

**Claim 25/24/23/19:** Knowlton'089 teaches using fluoroscopic images (Col. 17, Line 1-5). Knowlton'089 and Shah'737 fail to teach the second image. However, Strommer'548 teaches the obtaining the second image for the integration of two images from two different imaging modalities (Abstract & Page 2, Para 0013). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089, Shah'737 and Strommer'548 in order to view the location and orientation of the medical intervention device (e.g., catheter, needle) within the body of the patient during the operation (Page 1, Para 0002).

**Claim 26/24/23/19:** Knowlton'089 teaches using ultrasound images (Col. 17, Line 1-5). Knowlton'089 and Shah'737 fail to teach the second image. However, Strommer'548 teaches obtaining the second image for the integration of two images from two different imaging modalities (Abstract & Page 2, Para 0013). It would have been obvious to one of ordinary skill in the art to combine the teachings of Knowlton'089, Shah'737 and Strommer'548 in order to view the location and orientation of the medical intervention device (e.g., catheter, needle) within the body of the patient during the operation (Page 1, Para 0002).

9. Claim 34-35 & 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowlton'089 (US Patent No. 6,427,089 B1), in view of Shah'737 (US Patent No. 6,081,737) and further in view of Holmes'990 et al. (US Patent No. 4,873,990).

**Claim 34/19:** Knowlton'089 teaches the use of strain gauges on the balloon (Figure 2A & 3, Element 26 & Col. 15, Line 3-5) but fails to teach the circumferential configuration of the strain gauges around the balloon. However, Shah'737 teaches the strain gauges in a circumferential configuration (Figure 1, Element 12 & Figure 11, Element 94). Further, Holmes'990 teaches the circumferential configurations (Figure 1, Element 15) of the strain gauges [wall sensors] (Col. 2, Line 52-55 & Col. 6, Line 9-14) around the balloon. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Knowlton'089, Shah'737 and Holmes'990 in order to provide a measurement of true circumferential pressure (Col. 6, Line 9-14).

**Claim 35/34/19:** Knowlton'089 teaches strain gauges mounted on the balloon (Figure 2A & 3, Element 26 & Col. 15, Line 3-5). Knowlton'089 fails to teach the circumferential configurations of the strain gauges. However, Holmes'990 teaches the circumferential configurations (Figure 1, Element 15) of the strain gauges [wall sensors] (Col. 2, Line 52-55 & Col. 6, Line 9-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Knowlton'089, Shah'737 and Holmes'990 in order to provide a measurement of true circumferential pressure (Col. 6, Line 9-14).

**Claim 41/19:** Knowlton'089 fails to teach a wireless connection used by the strain gauges for reporting. However, Holmes'990 teaches a device wherein the strain gauges are operable to report strain through telemetry [wireless connection] (Col. 4, Line 30-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Knowlton'089, Shah'737 and Holmes'990 in order to provide information to remote equipment for monitoring (Col. 4, Line 38-36).

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Brown, David Lloyd. Device and Method for Locating Inflamed Plaque in an Artery, 02/16/1999. US Patent No. 5,871,449.
- b. Gregersen, Hans. Method and Apparatus for Stimulating a Bodily Hollow System and Method and Apparatus for Measuring Reactions to Stimuli of Such System, 03/03/2005. US Patent Application No. 2005/0049475 A1.
- c. Kassab, Ghassan S. Devices, Systems and Methods for Plaque type Determination, 09/15/2005. US Patent Application No. 2005/0203434 A1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Bor whose telephone number is 571-272-2947. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on 571-272-4740. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hcb



ELENI MANTIS MERCADER  
SUPERVISORY PATENT EXAMINER